

What is claimed is:

1. A centrifugal air blower comprising:

5 a fan having a plurality of blades spaced circumferentially therearound for generating an air flow;  
a scroll casing housing said fan therein and defining a first discharge passage for flowing air therethrough;

10 an extended case connected to said first discharge passage in said scroll casing and defining therein a second discharge passage which cross-sectional area progressively increases toward an outlet thereof; and

15 air guide means for guiding air in said second discharge passage, said air guide means having an arcuately shaped surface extending along said second discharge passage defined in said extended case.

2. A centrifugal air blower according to claim 1, wherein said air guide means has an edge at a position X to start increasing the vertical size of an outer wall of said extended case and an opposite edge at a position Y to start increasing the vertical size of an inner wall of the extended case, said position X being positioned upstream of said position Y.

25 3. A centrifugal air blower according to claim 1, wherein said arcuately shaped surface of said air guide means has a radius R1 of curvature near an outer wall of the

extended case and a radius R2 of curvature near an inner wall of the extended case, said radius R1 of curvature being greater than said radius R2 of curvature.

5           4. A centrifugal air blower according to claim 3, wherein a ratio  $R1/R2$  between said radius R1 of curvature near the outer wall of said extended case and said radius R2 of curvature near the inner wall of said extended case ranges from 2.90 to 3.15.

10           5. A centrifugal air blower according to claim 1, wherein said air guide means is disposed on a bottom surface of said second discharge passage.

15           6. A centrifugal air blower according to claim 1, wherein said air guide means is disposed on a ceiling surface of said second discharge passage.

20           7. A centrifugal air blower according to claim 1, wherein said air guide means is disposed on both a bottom surface and a ceiling surface of said second discharge passage.

25           8. A centrifugal air blower according to claim 1, wherein said air guide means is integral with said extended case and disposed in said second discharge passage.

9. A centrifugal air blower according to claim 1,  
wherein said air guide means is separate from said extended  
case and fixed to said second discharge passage.